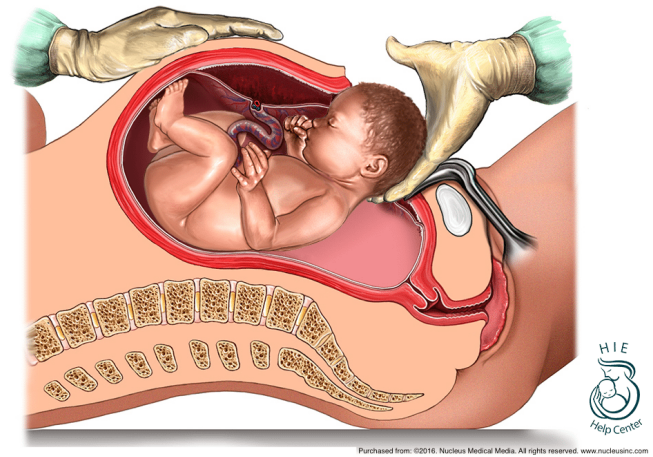




A C-section delivery is a surgical procedure for delivering a baby. In some cases, C-sections are planned beforehand (especially if a mother has had a prior C-section, preeclampsia, placental insufficiency, or pelvic issues that would make it dangerous to deliver vaginally). In other cases, C-sections are necessary in emergency situations where the health of the mother or baby are threatened and delivery needs to happen immediately.

Essentially, emergency C-sections are procedures done where immediate delivery is the only way to access the baby to provide medical care safely.



### Potential Indications for a C-Section

There are many situations where C-sections are safer for the baby than a vaginal birth. These include the following.

#### Potential Indications for C-Section in the Mother

- Placental abruption, insufficiency, placenta previa or placenta accreta
- Brain hemorrhage or aneurysm
- Vasa previa
- Uterine rupture
- Stalled labor
- Prior C-sections
- Preeclampsia
- Diabetes
- Active genital herpes or other maternal infections
- Twins or triplets



### Potential Indications for C-Section in the Baby

- Signs of fetal distress
- Umbilical cord complications:
  - Umbilical cord wrapped around the neck (nuchal cord)
  - True knot in the cord
  - Short umbilical cord
  - Umbilical cord compression
  - Umbilical cord prolapse
- Breech or face-presenting position
- Birth defect
- Shoulder dystocia (the baby's shoulder is stuck on the pelvic bone)
- Prematurity or extreme prematurity

In these situations, time is of the essence in delivering the baby, because prolonging labor can increase the risk of birth injury to the baby and health issues for the mother. There are specific time frames in which medical staff must perform a C-section, usually in less than 30 minutes. For some health conditions (cord prolapse, uterine rupture and fetal heart rate under 60 beat per minute), however, the time limit is far shorter (10-20 minutes or less).

Medical staff should be monitoring fetal heart rate continuously when a mother is admitted to the labor and delivery unit. If the baby's heart rate drops or begins to show signs of abnormal heart rate tracings, it means that the baby needs to be delivered immediately. If vaginal delivery can't be done quickly enough, a C-section is needed to immediately deliver the baby to provide it with needed medical care (like resuscitation or oxygen).

### Delayed C-Sections and the Risk of HIE

One of the things to look out for in preventing HIE is the risk of waiting too long to have a C-section. Sometimes medical staff can be reluctant to perform a C-section if a baby is showing signs of fetal distress, and they will attempt to speed up labor and vaginal delivery using



delivery drugs (like Pitocin or Cytotec) or delivery instruments like forceps or vacuum extractors. The difficulty with delivery drugs is that mothers can react unpredictably to them – a dose which will have no effect in one mother may have a massive effect on another, causing the uterus to contract strongly and decrease blood flow even further to an already-distressed baby. Delivery instruments require specific training to use properly, as improper use can cause brain bleeding and trauma. Oftentimes, C-sections in emergency situations are safer than attempting to speed up a vaginal delivery. One of the ways parents can mitigate the risk of having a C-section unsafely delayed is asking hospitals and doctors ahead of time about their C-section policies.